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Tara D. Knapp			MOORE, IAN N	
Baker Botts LLP 2001 Ross Avenue, Suite 800			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Occurrence	09/771,205	HOLUR ET AL.
Office Action Summary	Examiner	Art Unit
	Ian N Moore	2661
The MAILING DATE of this communication ap Period for Reply	ppears on the cover sheet with the c	orrespondence address
A SHORTENED STATUTORY PERIOD FOR REPI THE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a report of the provided for reply is specified above, the maximum statutory period for reply within the set or extended period for reply will, by stature Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	.136(a). In no event, however, may a reply be tin oly within the statutory minimum of thirty (30) day I will apply and will expire SIX (6) MONTHS from le, cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).
Status		
1)⊠ Responsive to communication(s) filed on <u>ame</u> 2a)⊠ This action is FINAL . 2b)□ Thi 3)□ Since this application is in condition for allowed closed in accordance with the practice under	s action is non-final. ance except for formal matters, pro	
Disposition of Claims		
4) Claim(s) 1-55 is/are pending in the application 4a) Of the above claim(s) is/are withdra 5) Claim(s) is/are allowed. 6) Claim(s) 1-55 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/	awn from consideration.	
9) The specification is objected to by the Examin	er.	
10)⊠ The drawing(s) filed on <u>01 September 2004</u> is		ted to by the Examiner.
Applicant may not request that any objection to the	e drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the E	· - · · · ·	
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for foreig a) All b) Some * c) None of: 1. Certified copies of the priority documer 2. Certified copies of the priority documer 3. Copies of the certified copies of the priority application from the International Burea * See the attached detailed Office action for a list	nts have been received. Its have been received in Applicationity documents have been received in Applicationity documents have been received in the contract of the contract o	on No ed in this National Stage
Attachment(s)		(270.440)
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4)	
 Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08 Paper No(s)/Mail Date 	5) Notice of Informal P 6) Other:	atent Application (PTO-152)

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DETAILED ACTION

Response to Amendment

1. An objection to the drawings is withdrawn since it is being amended accordingly.

 Claims 1-55 are rejected by the new ground(s) of rejection necessitated by the amendment.

Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. Claims 9,19 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites, "an agent advertisement" in line 2. It is unclear whether the "an agent advertisement" refers to "an agent advertisement" recites in claim 1, line 7.

Claim 19 recites, "an agent advertisement" in line 2. It is unclear whether the "an agent advertisement" refers to "an agent advertisement" recites in claim 11, line 7.

Claim 29 recites, "an agent advertisement" in line 2. It is unclear whether the "an agent advertisement" refers to "an agent advertisement" recites in claim 21, line 11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 1-3, 5, 11-13, 15, 21-23, 31-33, 39-43, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne (U.S. 6,711,141) in view of Mikkonen (U.S. 6,587,457) and further in view of Ton (U.S. 2002/0067704A1).

Regarding Claim 31, Rinne discloses a mobile unit (see FIG. 1 and FIG. 2, a protocol architecture of a mobile unit) operable to provide label edge routing a wireless network (see FIG. 1, UMTS packet radio network; see col. 3, lines 35-42), comprising:

a service access manager (see FIG. 2, a combined system of QMOC, Quality Management & Optimization Control) operable to establish a new data session (see FIG. 2, a new data secession/flow for E-mail, WWW, Multimedia Conferencing, FTP, and/or WAP; and see FIG. 3, steps 30-31; see col. 5, lines 1-10; see col. 6, lines 15-25) between a mobile unit and a serving node (see FIG. 1, the combined system of RNC and SGSN; see col. 3, lines 51-60); also see FIG. 4, step 40,

a forwarding information base (see FIG. 2, Classifier PAC) included in the mobile unit that is populated with a label stack (see col. 6, lines 24-27; Differential services (DS) in the IP header) associated with the data session (see col. 6, lines 25-32; 38-50; DS associated with a different data flow/session are stored/maintained in PAC),

correlating the label information (see col. 6, lines 24-27; DS or PHB information) to the data session (see FIG. 3, steps 31-33; see col. 5, lines 4-16; DSCP information is correlated/defined and processed according to type of flows/session) wherein the mobile unit is further operable to:

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allocate a session specific label (see FIG. 3, step 31; see col. 6, lines 31-39; a defined DSCP label for a specific flow/session is assigned/allocated to an IP header stack by filling/adding a DSCP label field in each output packet) in response to session activity (see FIG. 3, step 30; see col. 5, lines 1-2; when the QMOC application for establishing a connection begins) associated with an end user of the mobile unit (see FIG. 4, step 40; see col. 6, lines 53-56; see col. 4, lines 24-29; the application is started/initiated by the user of the mobile station to establish a session/flow);

communicate a new label stack (see FIG. 3,steps 32-33; see col. 6, lines 44-52; an IPv6 header with defined DSCP label) to the serving node such that the serving node can perform routing (see FIG. 2, RLC, MAC and L1; see FIG. 1, the combined system of RNC and SGSN; see col. 5, lines 1-10, see col. 3, lines 51-60) and

classify the data session (see FIG. 3, steps 31-32,36; and see FIG. 4, steps 41-44; col. 5, lines 3-14, col. 6, lines 45-51; defined and classify the session/flows).

Rinne does not explicitly disclose mobile unit receiving the label information and routing at a layer two level. However, a mobile unit receiving label information and routing at layer two level at the serving node is well known in the art. In particular, Mikkonen teaches a mobile unit (see FIG. 4B, MT) receiving a label information (see col. 9, lines 45-52; see col. 9, lines 30-32; MT receives a series/flow/label information) and communicates a label stack (see FIG. 4B, a radio data/packets 405 with RFID; see col. 9, lines 30-31, 45-48) to the serving node (see FIG. 4B, AP node) such that the serving node can perform routing at a layer two level (see FIG. 4B, L2, Layer 2, Data link layer; see col. 9, lines 28-29; see col. 1, lines 14-19; col. 7, lines 36-51). Therefore, it would have been obvious to one having

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ordinary skill in the art at the time the invention was made to provide routing at data link layer, layer 2, as taught by Mikkonen in the system of Rinne, so that it would reduce the need for performing time consuming routing on the basis of the address data of the network layer (i.e. Layer 3); see Mikkonen col. 3, line 16-20, see col. 5, lines 3-14.

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Neither Rinne nor Mikkonen explicitly disclose the mobile unit receiving an agent advertisement. However, the mobile unit receiving an agent advertisement is well known in the art. Ton discloses the mobile unit (see FIG. 2, Mobile Node MN) receiving an agent advertisement message (see FIG. 2, agent advertisement 215; see page 1, paragraph 10; see page 4, paragraph 44). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to receive an agent advertisement message at the mobile unit, as taught by Ton, in the combined system of Rinne and Mikkonen, so that it would provide a mechanism to determine whether it is on its home network or a foreign network; see Ton page 1, paragraph 10.

Regarding Claims 1,11, 21, 41,46 and 51, claims 1,11, 21, 41,46 and 51 are method, system, a computer-processable logic claims which that substantially all the limitations of the respective system claim 31. Therefore, they are subjected to the same rejections.

Regarding Claims 2, 12, 22, 32, 42, 47 and 52, Rinne discloses communicating one or more traffic characteristics (see col. 5, lines 50 to col. 6, lines 15; traffic parameters/definitions) associated with the end user to the serving node along with the new label stack (see FIG. 2, IPe; FIG. 3, step 33 and see FIG. 4, step 42, see col. 6, lines 39-50; 61-67; note that QMOC instructs IPe to add/form an IP header stack by filling/adding a

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DSCP label/flow field in accordance with the end user's request characteristic/attribute/session of the traffic/flow).

Regarding Claims 3, 13, 23, 33, 43, 48 and 53, Rinne discloses storing at the mobile unit, one or more flow labels for a plurality of applications of the mobile unit (see col. 6, lines 43-50; note that classifier PAC maintains/stores 16 different alternatives of QoS DSCP labels for various QoS profiles of applications); classifying one or more flow using one or more flow characteristics (col. 5, lines 3-14, see col. 5, lines 50 to col. 6, lines 15; col. 6, lines 45-51; note that QMOC determines/classifies the traffic characteristics/parameters/ definitions of the different data flow) and provisioning one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics (see FIG. 3, step 31; see col. 6, lines 31-39; a defined DSCP label is assigned/provisioned to an IP header stack by filling/adding a DSCP label field based on definition/parameters/characteristics of each traffic flow).

Regarding Claims 5 and 15, Mikkonen discloses removing at the mobile unit (see FIG. 4B, MT), an inbound label stack (see FIG. 4b, note at RFID 405 is removed at Layer 2; see col. 9, lines 30-31, 45-48) from each of the plurality of inbound packets (see col. 9, lines 45-52; see col. 9, lines 30-32; note that AP node transmits the radio data packets 405 towards the mobile terminal (i.e. inbound packets)); and

forwarding the plurality of inbound packets to an application included in the mobile unit (see FIG. 4B, IP flow 406 is forwarded to layer 3 (i.e. the application); see col. 9, line 30-34).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Rinne and Ton as taught by Mikkonen for the same reason stated in Claims 1, 11,21,31,41,46, and 51 above.

Regarding claim 39, Rinne disclose wherein the mobile unit includes a list of classes of service assigned to one or more end users associated with the mobile unit (see col. 5, lines 30 to col. 6, lines 15; 30-40).

Regarding claim 40, Rinne disclose traffic is received from one or more of the end users the mobile unit classifies the traffic with one or more labels included in its forwarding information base (see FIG. 3, steps 31-32,36; and see FIG. 4, steps 41-44; col. 5, lines 3-14, 30 to col. 6, lines 15, 45-51; defined and classify the session/flows).

6. Claims 4, 14, 24, 25, 34, 35, 44, 45, 49, 50, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne in view of Mikkonen and Ton, as applied to claims 1, 11,21,31,41,46 and 51 above, and further in view of Mustajarvi (WO 98/44639).

Regarding Claims 4, 14, 24, 34, 44, 49 and 54, the combined system of Rinne, Mikkonen, and Ton discloses all of the limitations as recited in claims 1, 11,21,31,41,46 and 51 above. Ton further discloses populating available information (see page 1, paragraph 8; see page 3, paragraph 36-38; the mobile node information) as part of an agent solicitation message (see page 1, paragraph 10; see page 6, claim 4) that is sent to the servicing node (see FIG. 2, Foreign Agent FA) by the mobile unit (see FIG. 2, Mobile Node, MN).

Neither Rinne, Mikkonen, nor Ton explicitly discloses a vendor extension field.

However, having a vendor extension filed in the mobile communication is well known in the

art. In particular, Mustajarvi discloses populating information (see col. 7, lines 1-20) in a vendor extension field (see FIG. 4, Extension field EF1 and EF2; see col. 7, lines 1-20; note that utilizing EF1 field is optional, however, the usage of optional filed is suggested by the a specific vendor/manufacturer, thus, it is vendor suggested extension field). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a vendor/manufacturer suggested extension field, as taught by Mustajarvi, in the combined system of Rinne, Mikkonen, and Ton, so that it would avoid additional load which reduces the capacity available to payload traffic by providing a mechanism of utilizing extension field in order to avoid collision in the transmissions; see Mustajarvi col. 5, line 15 to col. 6, lines 3.

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Regarding Claims 25,35,45, and 50, Mikkonen discloses removing at the mobile unit (see FIG. 4B, MT), an inbound label stack (see FIG. 4b, note at RFID 405 is removed at Layer 2; see col. 9, lines 30-31, 45-48) from each of the plurality of inbound packets (see col. 9, lines 45-52; see col. 9, lines 30-32; note that AP node transmits the radio data packets 405 towards the mobile terminal (i.e. inbound packets)); and

forwarding the plurality of inbound packets to an application included in the mobile unit (see FIG. 4B, IP flow 406 is forwarded to layer 3 (i.e. the application); see col. 9, line 30-34).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Rinne, Ton and Mustajarvi as taught by Mikkonen for the same reason stated in Claims 1, 11,21,31,41,46, and 51 above.

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Regarding Claim 55, the combined system of Rinne, Mikkonen, and Mustajarvi all claimed limitation as descried above in claim 54. Rinne discloses update the forwarding information (see col. 7, lines 11-21; see col. 6, lines 45-50; label forwarding information are maintained/updated) with a selected one or more of an Internet protocol address associated with the data session (see col. 2, lines 20-26; see col. 6, lines 40; IP address associated with source and destination of the user session), the session specific label (see col. 6, lines 25-35; DSCP) and traffic characteristics associated with the data session (see col. 5, lines 45 to col. 6, lines 15; traffic parameters).

7. Claim 6-7, 16-17, 26-27, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne in view of Mikkonen and Ton, as applied to claims 1, 11,21,31 above, and further in view of Gibson (U.S. 6,680,943).

Regarding claims 6, 16, 26, and 36, the combined system of Rinne, Mikkonen, Ton discloses the mobile unit with a label for the application as described above in claims 1, 11, 21 and 31 above. Rinne further discloses means for determining at the mobile unit flow characteristics (col. 5, lines 3-14, 50 to col. 6, lines 15, 45-51; note that QMOC determines/classifies the QoS characteristics/parameter of the different data flow) and a flow label for the flow (see col. 6, lines 40-42, 49-51; 60-67; note that a DSCP code/label is determined/classified based upon the desired QoS), the flow label comprising one of the labels (see col. 6, lines 43-50; note that a DSCP must comprise one of sixteen DSCP codes/labels.); and storing at the mobile unit the flow characteristics and the flow label for the flow (see col. 6, lines 43-50; note that classifier PAC maintains/stores 16 different QoS

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characteristics/parameters of the flows and DSCP labels for various QoS profiles of applications).

Neither Rinne, Mikkonen, nor Ton explicitly discloses generating at the mobile unit a label request; receiving at the mobile unit a label response based on the label request, the label response comprising at least one label. However, Gibson discloses means for generating a label request for the application (see FIG. 9, LSR 909 generates a label request message (LRM) 901 for the data transmission application; see col. 23, lines 30-35; also see FIG. 11, CR-LDP setup request message at EP 1202 and AM 1203);

means for receiving a label response based on the label request (see FIG. 9, LSR 909 receives a label response/mapping message (LMM) 907 in reply to request message; see col. 23, lines 48-52; also see FIG. 12, 200 OK response message at EP 1202 and AM 1203),

the label response comprising at least one label (see FIG. 9, LMM 907 reply message contains at least one label (i.e. label 1-3); see col. 23, lines 48-53);

means for determining the flow characteristics and a flow label for the flow (see col. 23, lines 14-22; note that since CR-LDP protocol which established labeled flow in the MPLS network, it is clear that the flow characteristic/QoS and flow label must be determined based upon traffic engineering method);

the flow label comprising one of the labels in the label response (see col. 23, lines 23-29; 48-52; note that since CR-LDP protocol is used, the received reply message label must be one of the flow label); and

means for storing the flow characteristics and the flow label for the flow (see FIG. 9, the routing table 908; see col. 23, lines 54-55; note that the LSR stores/adds the flow

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characteristic/QoS and flow label in the routing table). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide label request and response mechanism to a node, as taught by Gibson, in the combined system of Rinne, Mikkonen and Ton, so that it would provide advantage transmission of real time Internet messages over the MPLS network with guaranteed QoS traffic, and it also allows traffic engineering method to be applied to the MPLS network such that specific paths can be established through a set of chosen nodes with a particular QoS; see Gibson col. 2, lines 29-40, col. 3, lines 27-34, col. 23, lines 17-22, col. 31, lines 25-30.

Regarding claims 7, 17, 27 and 37, the combined system Rinne, Mikkonen, Ton and Mustajarvi discloses label responses as discloses above in claims 6, 16, 26 and 36. Gibson discloses the label response based on a label allocation performed at a label server (the combined system of admission manager (AM) 1204 (see FIG. 11) and Administration Server 35 (see FIG. 1)), the label server coupled to the network (see FIG. 1 and 11, the combined system is coupled to the MPLS network); see col. 6, lines 58-65, see col. 8, lines 42-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Rinne, Mikkonen, and Ton as taught by Gibson for the same reason stated in Claims 6,16,26, and 36 above.

8. Claims 8, 9, 18, 19, 28, 29 and 38are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne in view of Mikkonen, Ton and Gibson, as applied to claims 6,16,26, and 36 above, and further in view of Mustajarvi (WO 98/44639).

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Regarding claim 8, 18, 28 and 38, the combined system of Rinne, Mikkonen, Ton and Gibson disclose means for generating a label request message as described above in claims 6, 16, 26 and 36 above. Ton discloses the mobile unit generating an agent solicitation message (see page 1, paragraph 10; note that mobile unit with mobile IP protocol transmits the agent solicitation message). Neither Rinne, Mikkonen, Ton, nor Gibson explicitly discloses a vendor-specific extension. However, having a vendor extension field with a request in the mobile communication is well known in the art. In particular, Mustajarvi discloses a vendor extension field (see FIG. 4, Extension field EF1 and EF2) comprises transmission information (see col. 7, lines 1-20; note that utilizing EF1 field is optional, however, the usage of optional filed is suggested by the a specific vendor/manufacturer, thus, it is vendor suggested extension field which contains transmission information (i.e. requests/responses/ACK/NACK)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a vendor/manufacturer suggested extension field, as taught by Mustajarvi, in the combined system of Rinne, Mikkonen, Ton and Gibson, so that it would avoid additional load which reduces the capacity available to payload traffic by providing a mechanism of utilizing extension field in order to avoid collision in the transmissions; see Mustajarvi col. 5, line 15 to col. 6, lines 3.

Regarding claim 9, 19, and 29, the combined system of Rinne, Mikkonen, Ton and Gibson disclose means for receiving a label response as described above in claims 6, 16, 26 above. Ton discloses the mobile unit receiving an agent advertisement message (see page 1, paragraph 10). Neither Rinne'141 nor Gibson'943 explicitly discloses the agent advertisement message comprising a vendor-specific extension, the vendor-specific extension. However,

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having a vendor extension field with a response in the mobile communication is well known in the art. In particular, Mustajarvi discloses a vendor extension field (see FIG. 4, Extension field EF1 and EF2) comprises transmission information (see col. 7, lines 1-20; note that utilizing EF1 field is optional, however, the usage of optional filed is suggested by the a specific vendor/manufacturer, thus, it is vendor suggested extension field which contains transmission information (i.e. requests/responses/ACK/NACK)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a vendor/manufacturer suggested extension field, as taught by Mustajarvi, in the combined system of Rinne, Mikkonen, Ton and Gibson, so that it would avoid additional load which reduces the capacity available to payload traffic by providing a mechanism of utilizing extension field in order to avoid collision in the transmissions; see Mustajarvi col. 5, line 15 to col. 6, lines 3.

9. Claims 10, 20,30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne, Mikkonen. Ton and Gibson, as applied to claim 6, 16, 26, 39 and above, and further in view of well-established teaching in art.

Regarding claim 10, 20, and 30, the combined system of Rinne, Mikkonen, Ton and Gibson disclose the mobile unit supports label switching, and the serving node supports label switching as described above in 6, 16, and 26. Neither Rinne, Mikkonen, Ton, nor Gibson explicitly discloses determining/ensuring whether each system supports label switching.

Official Notice is taken that both the concept and the advantages of determining/ensuring whether each system supports label switching is well known and expected in the art. In

particular, it is well known that one skill in ordinary art that one must determine whether the mobile unit supports label switching and the serving node supports label switching before performing a label switching in order to avoid incompatibilities between two systems.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a mechanism to determine whether the mobile unit and the support node supports a label switching, as taught by well established teaching in art, in the combined system of Rinne, Mikkonen, Ton and Gibson, so that it can avoid any potential failure due to incompatibilities between two systems.

Response to Arguments

10. Applicant's arguments with respect to claim 1-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM 12/6/04

BRIAN NGUYEN PRIMARY EXAMINE!